

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of

Inventor(s):

Olivier J. Poncelet, et al.

INKJET RECORDING ELEMENT

Serial No.: 10/521,898

Filed: January 14, 2005

Group Art Unit: 1794

Examiner: David J. Joy

Commissioner for Patents

Alexandria, VA 22313-1450

Sir:

**PRE-APPEAL BRIEF REQUEST FOR REVIEW**

Applicants request review of the final rejection in the above identified application. No amendments are being filed with this request. This request is being filed with a Notice of Appeal. The review is requested based on the following arguments.

**ARGUMENTS**

Claims 1-3 and 5-25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. in view of Poncelet et al. Such rejection represents clear error, as the present claims require use of a hybrid aluminosilicate polymer obtained by a specified preparation method by either treating a mixed aluminum and silicon alkoxide of which the silicon has both hydrolyzable substituents and a non-hydrolyzable substituent, or a mixed aluminum and silicon precursor resulting from the hydrolysis of a mixture of aluminum compounds and silicon compounds only having hydrolyzable substituents and silicon compounds having a non-hydrolyzable substituent, with an aqueous alkali, in the presence of silanol groups. In accordance with the invention, the presence of such non-hydrolyzable group results in a hybrid aluminosilicate polymer, i.e., an aluminosilicate which retains such non-hydrolyzable group covalently bonded to silicon (see, e.g., definition of “non-hydrolyzable substituent” expressly set forth at page 4, lines 3-8 of the specification, where it is explained that such non-hydrolyzable substituent does not separate from the silicon atom during the process, while hydrolysable substituents are eliminated by hydrolysis in the same conditions). **Use of such a hybrid aluminosilicate polymer obtained from silicon compounds having non-hydrolyzable substituents is clearly not**

taught or suggested by either of Lie et al or Poncelet et al., as such references only disclose use of fully alkoxylated (i.e., all hydrolyzable groups) silicon compounds in the preparation of the aluminosilicates thereof (see, e.g., use of ethyl orthosilicate at col. 23, line 15 of Liu et al, and  $\text{Si}(\text{OCH}_3)_4$  at col. 4, line 33 of Poncelet et al). The further presence of a water soluble organic polymer during the formation of the aluminosilicate in Poncelet et al. does not result in a hybrid aluminosilicate polymer itself as is obtained for the described product-by process compositions (i.e., an aluminosilicate polymer with by definition necessarily retained non-hydrolyzable substituents bonded to silicon atoms of the hybrid aluminosilicate polymer) as employed in the present invention, but rather a conventional polymeric aluminosilicate in an organic polymeric matrix. Thus, such aluminosilicate polymers themselves are clearly distinct, and neither Liu et al or Poncelet et al suggest the use of a hybrid aluminosilicate polymer in accordance with the present invention.

The Examiner's comments in the Advisory Action mailed April 20, 2009 that there is "nothing in the claimed product portion of the present claims that positively recites the presence of hydrolysable and non-hydrolyzable substituents groups in the formed aluminosilicate polymer product" thus represents clear error, as the claimed product-by-process composition requires use of non-hydrolyzable substituents in the compounds used to form the hybrid aluminosilicate polymer, and as non-hydrolyzable substituents are expressly defined in the specification as being substituents that are not separated from the silicon atom during the described method of formation of the hybrid aluminosilicate polymer (with respect to the Examiner's comments as to any requirement for presence of hydrolysable substituent groups in the formed aluminosilicate polymer, it is further noted that such comment is also in error, as to the contrary, while such hydrolysable substituent groups are present in the starting compounds employed in the described method, as expressly noted at page 4, lines 7-8 such hydrolysable substituents are eliminated by hydrolysis during the method of preparing the hybrid aluminosilicate polymer). Thus, the non-hydrolyzable substituents by definition are necessarily present in the resulting hybrid aluminosilicate polymer. Accordingly, even if one were to employ the "composite" product of Poncelet et al in the ink jet recording material of Liu et al. as proposed by the Examiner, the present claimed invention employing a hybrid aluminosilicate polymer with retained non-hydrolyzable substituents bonded to silicon atoms still

would not be obtained. Thus, the proposed rejection represents clear error, and withdrawal thereof is respectfully urged.

The Examiner further argues in the Advisory Action that there is nothing taught by the present specification that defines what is meant by an ink jet recording element having an ink-receiving layer that comprises at least one hydrosoluble binder and at least one hybrid aluminosilicate polymer, and that there is nothing claimed that would lead the skilled artisan to conclude that claiming a hybrid aluminosilicate polymer requires that the polymer has retained both hydrolysable and non-hydrolyzable substituent groups. While the Examiner's comments as to retained hydrolyzable substituents are again in clear error, the meaning of hybrid aluminosilicate polymers obtained from a compound having non-hydrolyzable substituents is believed clear based on the above explanation, and as further described, e.g., at page 4, lines 16-18 ("This is the non-hydrolyzable substituent that will be found again in the hybrid aluminosilicate polymer material..."); and at page 8, line 30 to page 9, line 2 ("The introduction of non-hydrolyzable substituents, such as organic functions, enables providing for example an organophilic character to the resulting hybrid aluminosilicate polymers").

The Examiner argues that while Applicant argues that Liu and Poncelet disclose a different product than the product obtained by the specified preparation method that is presently claimed, Applicant has produced no dispositive evidence to support this position, as the present claims are drawn to an article/product that comprises a polymer obtained by a specified preparation method, and as the patentability of a product does not depend on its method of production. The Examiner's position is again believed to represent clear error, as no consideration has been given by the Examiner to the specified starting materials as required for the claimed product-by-process, in combination with the express definition of the "non-hydrolyzable substituent" as required for the specified starting materials. Together, such requirements by definition necessarily result in a hybrid aluminosilicate polymer that has retained non-hydrolyzable substituents, which is clearly a different product than that obtained in the cited prior art. Applicants have requested the Examiner to identify where in either of such references use of such a hybrid aluminosilicate polymer obtained from a silicon compound with a non-hydrolyzable group (which by definition is necessarily

retained) is taught, but the Examiner has failed to identify any such disclosure in the applied references.

While the above explanation is believed sufficient to establish the clear error of the rejection, regarding the Examiner's statement that if the product in a "product-by-process" claim is the same as or obvious from a product of the prior art the burden shifts to applicant to come forward with evidence establishing an unobvious difference between the claimed product and the prior art product, in addition to the compositional difference explained above (and thus, the product is not the same as the prior art product) Applicants have further explained that the Examples of the present application further clearly demonstrate improved performance with respect to dye keeping properties and gloss for ink jet recording elements employing a hybrid aluminosilicate polymer in accordance with the invention (e.g., Examples 8-12) in comparison to use of aluminosilicate polymers prepared without non-hydrolyzable groups (Example 7). The Examiner has further failed to address such showing of unexpected results.

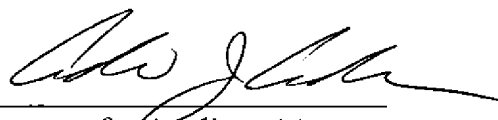
While it is believed clear in view of the above comments that the proposed combination would not result in the claimed invention, it is still further maintained that such combination would further in any event not have been suggested to one skilled in the art as Poncelet et al is directed towards use of organic/inorganic composites as antistatic components for a photographic product, while Liu et al is directed towards ink jet recording materials. While the Examiner argues in the Advisory Action that a reference maybe relied on as a basis for rejection of an applicant's invention if it is "reasonably pertinent to the particular problem with which the inventor is concerned", or if "it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem", the Examiner still fails to propose any justification as to why an improvement in antistatic materials designed for use in photographic materials (as is the subject of Poncelet et al) would be "reasonably pertinent" to the problem addressed by Applicants or Liu et al, or logically would have commended itself to Applicant's or Liu's attention in considering their problems for use in an ink jet recording material. Applicant's invention and Liu et al have nothing to do with photographic elements, and the aluminosilicate materials employed in Applicants invention and Liu et al are not disclosed as being used for

antistatic purposes, as is the use in Poncelet et al. Accordingly, there has been no reasonable motivation proposed for the proposed combination (simply noting that both references relate to "imaging elements" clearly falls far short as to providing any motivation to combine the teachings thereof), and a *prima facie* case of obviousness for such combination has not been established. Again, Applicant maintains in any event that even if such teachings were to be combined, the present invention still would not be obtained as explained above.

In summary, Poncelet et al teaches a composite based on an organic polymer and a polymeric aluminosilicate, not a hybrid aluminosilicate polymer obtained from starting materials that comprise a non-hydrolyzable substituent that by definition is not removed during the hybrid polymer formation method. As the aluminosilicate in Poncelet et al is not prepared from silicon precursor that has a non-hydrolyzable substituent, the aluminosilicate polymer obtained in Poncelet et al is distinct from that employed in the present invention. Thus, the use of a composite product as taught in Poncelet in the ink jet recording material of Liu et al would not result in the present claimed invention. Further, Poncelet et al is in any event directed towards use of such composite materials as antistats in photographic elements, and does not suggest their use ink jet recording materials. The rejection represents clear error, and withdrawal of the rejection is accordingly strongly urged.

In view of the above, it follows that the Examiner has clearly not established a *prima facie* case of obviousness of the subject matter of the claims relative to the teaching of the cited references. Rather, the rejections of the claims are clearly in error, and withdrawal of such rejections is courteously solicited.

Respectfully submitted,



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If the Examiner is unable to reach the Applicant(s) Attorney at the telephone number provided, the Examiner is requested to communicate with Eastman Kodak Company Patent Operations at (585) 477-4656.

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